City of Mountain View

COMMUNITY DEVELOPMENT DEPARTMENT
BUILDING DIVISION
500 Castro Street, P.O. Box 7540
Mountain View, CA 94039-7540
650-903-6313 | MountainView.gov

PHOTOVOLTAIC SYSTEM INSTALLATION GUIDE

MULTIFAMILY RESIDENTIAL DWELLINGS & COMMERCIAL BUILDINGS

SUBMITTAL REQUIREMENTS

A permit is required for photovoltaic system installation. The permit shall be obtained prior to the start of the work.

One electronic set of plans, digitally signed by the designer/architect, contractor, or homeowner responsible for preparing the plans. All plans submitted shall be on a minimum plan size of 11" x 17" and **must be legible** to facilitate digital imaging as a permanent record after the project is completed.

Exterior modifications to buildings may require Planning review and approval prior to submittal to the Building Division.

If the property is overseen by a Homeowners Association a letter of authorization signed by the HOA, is required.

1. **SITE PLAN.** Provide a site plan showing the location of:
    a. Existing or proposed structure(s) for which the PV system shall be mounted.
    b. Parcel dimensions and outline.
    c. Label street(s) frontage and access.
    d. Outline panel configuration or layout on existing/proposed structure.
    e. Location of ground mounted cabinet or equipment.
    f. Show on the plans a complete and clear scope of work, including main panel upgrade, new subpanels and/or proposed energy storage systems.
2. **ROOF PLAN.** Provide a roof plan showing:
    a. Location and size of main service panel.
    b. Location and size of subpanel, existing and/or proposed.
    c. Location of PV system.
    d. Roof access, pathways and setbacks proposed.
    e. Existing roof ventilation affected by the location of the proposed PV.
    f. Detailed panel configuration or layout with dimensions of rooftop.
    g. Identify the required egress windows to show compliance with code requirement #7 (above).
3. **CROSS SECTION.** Provide a cross section/elevation detail showing the following:
    a. Existing roof rafters, spacing and roof slope where the PV modules are going to be attached.
    b. Minimum and maximum separation between roof and proposed PV modules.
    c. Roof type & materials.
    d. Panel attachment system type and minimum embedment (2 ½ inches minimum).
    e. Support spacing layout and dimensions (shall be spaced maximum 48 inches o.c. in each direction).
4. **ELECTRICAL LINE DIAGRAM.** Provide an electrical line diagram showing the following items:
    a. Existing or proposed main service panel size (amps) and disconnect.
    b. Size and type of conductors.
    c. Voltage and amperage of all circuits.
    d. Overcurrent protection.
    e. Equipment grounding.
    f. Disconnection devices – AC & DC.
    g. Equipment labeling.
    h. Connection of storage batteries (if applicable).
5. **SYSTEM SIGNAGE.** Provide a plan page with all the required markings/labels per CEC.

Revised: 7/25/2023

6. **SYSTEM INFORMATION.** Provide manufacturers cut sheets and listing information for all the components (listed equipment, storage battery racking system and attachment details) per CBC 1511.9.

7. **BATTERIES INSTALLED.** Show on the floor plan the equipment installed.
    a. If installed in enclosed space, show dimensions of space and working clearances.
    b. Storage battery layout with racking system.
    c. Show method of protection for components installed subject to damage.
    d. ESS Batteries to have a minimum of 3 feet clearance between batteries.

8. **SERVICE DISCONNECTING.** Per section 8.51(C) & (D) of the MVCC the service disconnecting means for one family dwelling shall have a rating of not less than 200 amperes.

BASIC CODE REQUIREMENTS

The following is a listing of the general code requirements based on the **2022** California Codes & Mountain View Municipal Code. This handout is intended to provide general information. If you have questions, please contact the Building Division at (650) 903-6313 or email us at building@mountainview.gov.

9. Show compliance on the plans with the current California Building Code, California Fire Code and the electrical portion shall be installed in accordance with the California Electrical Code.

10. Photovoltaic system, the installation of equipment, and all associated wiring and interconnections shall be performed only by qualified personnel (CEC 690.4C). This is defined as a person who has skills and knowledge related to the construction and operation of the electrical equipment and installations and has received safety training to recognize and avoid the hazard involved. If not meeting the definition of qualified personnel, the applicant shall obtain approval from the Chief Building Official.

11. Rooftop-mounted solar photovoltaic system and ground-mounted solar photovoltaic system shall be installed in accordance with California Fire Code Section 1205.

12. Building-integrated photovoltaic (BIPV) systems shall comply with CFC Section 1205.2.3 & CBC Section 1505.8-1505.9 & 1507.17.

13. Photovoltaic shingles systems shall comply with CBC Section 1507.16.

14. Show compliance on the plans with access, pathways, and setback requirements (CFC Section 1205.2 for Group R-3 or Section 1205.3 for other than Group R-3).

15. Panels and modules installed on Group R-3 buildings shall not be placed on the portion of a roof that is below an emergency escape and rescue opening. A pathway not less than 36 inches wide shall be provided to the emergency escape and rescue opening (CFC 1205.2.2).

16. Conduits, wiring systems, and raceways for photovoltaic circuits shall be following the CFC Section 1205.2.4 for Group R-3 or Section 1205.3.4 for other than Group R-3.

17. Smoke ventilation. The solar installation shall be designed in accordance with Section CFC Section 1205.3.3.

18. Buildings with rapid shutdown solar photovoltaic system shall comply with CFC Section 1205.4.

19. Ground-mounted solar photovoltaic system shall be installed in accordance with CFC Section 1205.5.

20. Support and attachment of photovoltaic panels to the roof structure shall comply with CBC 1511.9.1.

21. Roof penetrations shall be flashed and sealed in accordance with chapter 15 of the CBC.

OTHER RELATED HANDOUTS

- Smoke Detector & Carbon Monoxide requirements
- Self-Certification - Smoke & Carbon Monoxide Detectors

Revised: 7/25/2023